

## Freeform Search

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<b>Term:</b>	L12 and housing same transparent	
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result set

DB=USPT; PLUR=YES; OP=ADJ

<u>L13</u>	L12 and housing same transparent	10	<u>L13</u>
<u>L12</u>	210/321.6.ccls.	306	<u>L12</u>
<u>L11</u>	L10 and window	2	<u>L11</u>
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<u>L9</u>	L8 and membrane	19	<u>L9</u>
<u>L8</u>	210/95.ccls.	291	<u>L8</u>
<u>L7</u>	L5 and inspect	0	<u>L7</u>
<u>L6</u>	L5 and inspecting	0	<u>L6</u>
<u>L5</u>	L3 and window	18	<u>L5</u>
<u>L4</u>	L3 and inspection window	0	<u>L4</u>
<u>L3</u>	210/651.ccls.	994	<u>L3</u>
<u>L2</u>	L1 and membrane	1	<u>L2</u>
<u>L1</u>	housing same transparent and inspection window	38	<u>L1</u>

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L13: Entry 10 of 10

File: USPT

Dec 10, 1974

DOCUMENT-IDENTIFIER: US 3853478 A  
TITLE: SOLUTE METERING APPARATUS

Detailed Description Text (23):

As best seen in FIG. 3, a baffle network 170 is disposed within the boiler chamber 30 of the device 20 and functions to provide a tortuous path for steam bubbles rising in the chamber 30 such that the bubbles are broken up into smaller size whereby non-condensable gases such as air can be more readily stripped from the feed water being heated in the boiler chamber 30, as more fully described in copending application Ser. No. 317,622, filed Dec. 22, 1972. Referring again to FIG. 4, the solute container 56 is seen to be constructed of a transparent material (such as any suitable plastic) and includes an upper surface 172 which extends to an end portion 174 which, when the solute container 56 is disposed within the fifth chamber 42 of the device 20, is adapted to overhang the rear housing portion 52 to provide a viewing window the function of which will be more apparent infra.

Current US Cross Reference Classification (2):  
210/321.6

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L13: Entry 5 of 10

File: USPT

Dec 25, 1990

DOCUMENT-IDENTIFIER: US 4980297 A

TITLE: Device for the membrane separation of the components of a liquid sample

Detailed Description Text (32):

The housing of the present invention may be constructed of a wide variety of materials such as metals, plastics and ceramics. Plastic materials are more desirable because of their ability to be molded into a wide variety of complex shapes and for compatibility with blood. Transparent thermoplastic materials are preferred so that the operability of the device can be observed through the housing walls. A wide variety of metals and plastics are suitable for the various cannulae of the present invention, with medical grade stainless steel being preferred. The choice of material for the separator membrane will depend on the composition of the materials being separated and the sizes of the particles which should be effectively blocked from passing through the membrane. Commercially available dialyzing membranes and ultrafiltration membranes may be used. Representative of such membranes are polycarbonate and polyester membranes having a pore size of within the range of between about 0.2 micron and 1.5 microns as manufactured by Nucleopore Corporation of Pleasanton, Calif., U.S.A.

Current US Cross Reference Classification (2):210/321.6[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

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### Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: US 6017459 A

L11: Entry 1 of 2

File: USPT

Jan 25, 2000

US-PAT-NO: 6017459

DOCUMENT-IDENTIFIER: US 6017459 A

TITLE: Apparatus and method for the monitoring of membrane deposition

DATE-ISSUED: January 25, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zeiher; E. H. Kelle	Naperville	IL		
Post; Brian F.	Lombard	IL		
McCoy; William F.	Naperville	IL		
Chaffin; Timothy L.	Naperville	IL		

US-CL-CURRENT: 210/650; 210/321.6, 210/323.1, 210/340, 210/652, 210/85, 210/94,  
210/95, 210/96.2

Full	Title	Citation	Front	Review	Classification	Date	Reference				Claims	KWIC	Draw. Data
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☐ 2. Document ID: US 4983282 A

L11: Entry 2 of 2

File: USPT

Jan 8, 1991

US-PAT-NO: 4983282

DOCUMENT-IDENTIFIER: US 4983282 A

TITLE: Apparatus for removing liquid from a composition and for storing the deliquified composition

DATE-ISSUED: January 8, 1991

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Roy; Bryan A.	Harrison	NJ		
Boris; Gregory F.	Sewell	NJ		
Campbell; John J.	Prospect Park	PA		
Funk; John G.	Raleigh	NC		
Wozniak; David J.	Gloucester	NJ		

h e b b g e e e f e e e f b e

Gibson; James D.                      Voorhees                      NJ  
McCauley; Robert M.                Vincentown                   NJ

US-CL-CURRENT: 210/95; 210/104, 210/257.2, 210/258

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMIC	Draw D
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L10 and window	2

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L10: Entry 7 of 11

File: USPT

Apr 4, 1989

DOCUMENT-IDENTIFIER: US 4818385 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Filter with high pressure indicator

Detailed Description Text (16):

Referring to FIGS. 3A and 3B, another embodiment of the indicator means 22' is shown. In this embodiment, a sight indicator 42 is attached to the cylindrical tube 26 of the housing 25. The sight indicator 42 has an overflow cavity 43 adjacent the cylindrical tube 26 and a transparent sight glass 44 sealably imposed over the overflow cavity 43 in a position such that a person may view the overflow cavity 43 from outside the housing 25 through the sight glass 44. A colored liquid is contained in a solution reservoir 46 which is exposed to fluid pressure inside the housing 25. The reservoir 46 may be provided by a small plastic bag or the like and is positioned or colored to shield the liquid from view through the glass 44. A seal is formed between the cavity 43 and the reservoir 46 such as by a rupturable membrane, for example, which is configured to rupture and release the opaque liquid into the cavity 43 upon exposure of the reservoir 46 to a pressure in excess of the predetermined level. The opaque solution is selected so that when present in the overflow cavity 43, it provides a noticeable contrast to an empty overflow cavity, and thereby clearly indicates to a person viewing the filter the occurrence of a fluid pressure in the filter in excess of the predetermined level. It will be appreciated that the indicator means 22' of FIGS. 3A and 3B may be located at any convenient position on the housing 25. One such location which is particularly advantageous, taking into consideration the surge protection feature of the invention to be subsequently described, is on the outboard end 29 of the housing 25 which enables isolation of the sight indicator 42 from the effect of fluid pressure surges in the filter.

Detailed Description Text (17):

FIG. 4 illustrates another embodiment of the indicator means 22' including an elongate transparent tube 48 which is resiliently radially deformable, and a sliding spherical indicator 50 received in a generally uniform diameter bore 52 of the tube 48. The tube 48 has an open pressure end 54 which extends through an opening in a dome-shaped cap 56 which closes the outboard end 29 of the tube 26. The pressure end 54 of the resilient tube 48 is sealably connected to a rupturable fluid reservoir 58 located inside the housing 25. The reservoir 58 contains fluid and is configured to rupture at the predetermined pressure, and at the location of its connection to tube 48, so that the fluid which it contains enters the pressure end 54 of the tube 48. Also, provision is made to prevent fluid which is to be filtered from leaking out of the housing 25 where the tube 48 extends through the cap 56.

Current US Cross Reference Classification (3):

210/95

## CLAIMS:

11. An externally mounted filter for use in filtering contaminated fluids from a fluid-containing system and being adapted to indicate the occurrence of a sustained fluid pressure in the filter in excess of a predetermined pressure level, said

filter comprising:

a housing for containing fluid in the filter;

means for sealably connecting said housing to the fluid-containing system in flow communication therewith;

a filter element disposed within said housing for removing contaminants from the fluid;

indicator means disposed in said filter, said indicator means being exposed to fluid pressure in the filter and configured to assume a signaling configuration upon exposure to a fluid pressure in the filter in excess of the predetermined level, said indicator means being visible in said signaling configuration to a person viewing the filter from the outside of the housing;

surge discrimination means configured to limit exposure of said indicator means to fluid pressure in the filter during the occurrence of fluid pressure surges in excess of the predetermined level so that said indicator means is exposed to the fluid pressure in the filter substantially only during periods of sustained fluid pressure; and

said indicator means comprising:

a sight indicator mounted on said housing, said sight indicator having an overflow cavity and a transparent sight glass visible from outside said housing, said sight glass sealably imposed upon said overflow cavity to define a transparent wall through which a person viewing said housing from outside the filter can also view said overflow cavity;

an opaque fluid; and

a solution reservoir containing said opaque fluid, said reservoir configured to transfer said opaque fluid into said overflow cavity in response to fluid pressure in the filter in excess of said predetermined level, thereby indicating to a person viewing the housing from the outside of the filter the occurrence of a fluid pressure in the filter in excess of the predetermined level.

13. The filter of claim 12, wherein said tube is flexible to enable its radial expansion under the influence of said spherical indicator, and is transparent to enable visual observation from outside said housing of the position of said indicator in said bore.

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<b>Term:</b>	L9 and transparent	
<b>Display:</b>	10	<b>Documents in Display Format:</b> CIT
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**DATE:** Wednesday, September 29, 2004   [Printable Copy](#)   [Create Case](#)

#### Set Name Query

side by side

DB=USPT; PLUR=YES; OP=ADJ

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<u>L9</u>	L8 and membrane	19	<u>L9</u>
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<u>L2</u>	L1 and membrane	1	<u>L2</u>
<u>L1</u>	housing same transparent and inspection window	38	<u>L1</u>

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